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09/679,470	10/04/2000	Richard W. DeLange	Grant Prideco-109	5425

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EXAMINER

LUGO, CARLOS

ART UNIT

PAPER NUMBER

3677

DATE MAILED: 05/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/679,470

Applicant(s)

DELANGE ET AL.

Examiner

Carlos Lugo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on amendmend filled on 15 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-17 is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed February 15, 2002 (Paper No. 7) have been fully considered but they are not persuasive.

The frustoconical box seal surface is the surface that engages with the frustoconical pin seal surface (elements 23 and 23 of the Application). Griffin discloses and illustrates this feature.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the annular elastomeric seal ring on the external seal, wherein the external seal includes frustoconical surfaces, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:
 - Reference character "32" has been used to designate both an axial end (Figure 1) and the pipe (Figure 3).
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:
 - Element 37a, 149, 150a, 151 and 182 are not illustrated in the drawings.
 - Page 10 Line 2, Page 11 Line 15, Page 12 Lines 2 and 24, Page 13 Line 23, Page 14 Lines 21 and 22 and in page 15 Line 8, element named "area A" is not showed in the drawings.

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- Page 10 Line 7, element named "area B" is not showed in the drawings.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to because of the following informalities:

- Claim 2 Line 2, add --body-- after "tubular".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 discloses that the external seal includes an annular elastomeric seal ring. However, claim 10 depends from claim 5 wherein the external seal has frustoconical surfaces. Either in the specifications or in the drawings is discloses this combination.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 2,825,585 to Griffin.

Regarding claim 1, Griffin discloses a connection comprises a pin member (element 10) having pin threads (element 32), formed externally and extending from a starting point and terminating adjacent the pin end. That external surface has an outside diameter no greater than the outside diameter of a major length of the pin member.

A box member (element 11) includes a threaded surface (element 21) to be engaged with the pin-threaded surface. This box-threaded surface extends from a starting point and terminating adjacent the box end or in the opposite direction of the pin threaded surface.

An external seal is located between the pin and the box element. It is located adjacent the starting point of the pin threaded surface and the box end.

This external seal comprises a frustoconical pin seal surface (element 33), formed externally on the pin and having a decreasing diameter in a direction toward the free pin end, and a frustoconical box seal surface (element 51), formed internally and having an increasing internal diameter toward the free box end.

An internal seal (elements 22 and 31) is located adjacent the starting point of the box threaded surface and the pin end. The pin and box threads are confined between the external and internal seals.

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As to claim 2, Griffin discloses that the pin threads run out to an outside diameter of the first tubular body at the starting point of the pin threads.

As to claim 3, Griffin discloses that the pin threads are substantially cylindrical between the starting point and the end of the pin.

As to claim 4, Griffin discloses that the pin seal surface (element 33) is formed on a radially enlarged section of the first tubular body.

As to claim 5, Griffin discloses that the pin threads and the box threads are fully confined between the external and internal seals when the pin and the box members are engaged.

9. Claims 6-8 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 1,590,357 to Feisthamel.

Regarding claim 6, Feisthamel discloses a connection comprises a pin member (element 2a) having pin threads, formed externally and extending from a starting point and terminating adjacent the pin end. That external surface has an outside diameter no greater than the outside diameter of a major length of the pin member. The pin threads run out to an outside diameter of the first tubular body at the starting point of the pin threads.

A box member (element 1a) includes a threaded surface to be engaged with the pin-threaded surface. This box-threaded surface extends from a starting point and terminating adjacent the box end or in the opposite direction of the pin threaded surface.

An external seal is located between the pin and the box element. It is located adjacent the starting point of the pin threaded surface and the box end. The external seal comprises an annular elastomeric seal (element 13) disposed between the pin and the box.

An internal seal (element 7a) is located adjacent the starting point of the box threaded surface and the pin end. The pin and box threads are confined between the external and internal seals.

As to claim 7, Feisthamel discloses that the pin threads and the box threads are fully confined between the external and internal seals when the pin and the box members are engaged.

As to claim 8, Feisthamel discloses that the annular elastomeric seal ring (element 13) is carried in an annular groove (element 12) formed on the first tube.

As to claim 12, Feisthamel discloses that the box carries a substantially frustoconical seal surface adjacent a face at an axial end of the second tube and the pin carries an annular elastomeric seal ring (element 13) adjacent the starting point for the pin threads, whereby the frustoconical surface engages the seal ring to provide the external seal when the pin and the box are engaged.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 1,590,357 to Feisthamel.

Feisthamel discloses the invention substantially as claimed. However, Feisthamel fails to disclose that the annular elastomeric seal ring is carried in an annular groove formed on the second tube. Feisthamel discloses that the annular elastomeric seal ring (element 13) is carried in an annular groove (element 12) formed on the first tube.

Applicant is reminded that the reversal of components in a prior art reference, where there is no disclosed significance to such reversal, is a design consideration within the skill of the art. In re Gazda, 219 F.2d 449, 104 USPQ 400 (CCPA 1955); In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an annular groove in the second pipe because it would perform the object of placing the annular seal ring in order to prevent the loosening of the connection.

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 2,825,585 to Griffin in view of US Pat. No. 1,590,357 to Feisthamel.

Griffin fails to teach that the external seal is an annular elastomeric seal ring carried externally on the first tube and adapted to engage a face formed on at an axial end of the box.

Feisthamel teaches an annular elastomeric seal ring (element 13) that is carried in an annular groove (element 12) formed on a first tube and adapted to engage a face formed on at an axial end of a box.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an annular groove receiving an annular seal ring, as taught by Feisthamel, into the coupling device disclosed by Griffin, in order to prevent the loosening of the connection.

Allowable Subject Matter

12. Claims 13-17 are allowed.

13. Claim 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents cited further show the state of the art with respect to threaded connections.

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lugo. The examiner phone number is (703)-305-9747. The fax number for correspondence before a final action is (703)-872-9326 and the fax number for correspondence after final action is (703)-872-9327. The email direction of the examiner is carlos.lugo@uspto.gov. The examiner can normally be reached on Monday to Friday from 9:30am to 6:30pm (EST). If the examiner is not available, please leave a message, including the application number and the examiner will answer the message as soon as possible.

April 22, 2002


J. J. SWANN
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